Graph Theory Fall 2021

Bonus Question (up to 5 pts.)

We observe that $5! = 120$ and $2^7 = 128$. Thus,

$$\frac{2^7}{5!} = \frac{128}{120} \approx 1.0667.$$

We observe that

$$1 < 1.0667 < 1 + 10^{-1}.$$

For n bonus points, find positive integers $p > 7$ and $q > 5$ such that

$$1 < \frac{2^p}{q!} < 1 + 10^{-(n+1)}.$$